

Title: Improved Structure of Spring Bolt

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A translation of the Brief Description of the Drawings and the claims of cited reference 1 follows.

Brief description of the drawings

Fig. 1 is an exploded perspective view of the bolt according to the invention.

Fig. 2 is a cross-sectional view of the bolt according to the invention.

Fig. 3 is a cross-sectional view showing the bolt in use.

Fig. 4 is a cross-sectional view showing the bolt in use.

Fig. 5 is an exploded perspective view of the bolt according to a second embodiment of the invention.

Fig. 6 is an exploded perspective view of the bolt according to a third embodiment of the invention.

Figs. 7A and 7B are cross-sectional views showing the bolt in Fig. 6 in use.

What is claimed is

1. An improved structure of a spring bolt, comprising a fixing post (20) into which an inner post (21) is inserted, the inner post (21) having several positioning holes (22) arranged in an equal distance, wherein the bolt passes through the fixing post (20) and is inserted into one of the positioning holes (22) of the inner post (21); characterized in that: a shaft (15) passes an elastic member (16) and a connecting shaft (10); one end of the connecting shaft (10) has threads, such that the connecting shaft (10) can be threaded into the fixing post (20); the shaft (15) passes through the connecting shaft (10) and then fixed to the knob (17); the connecting shaft (10) has an end (13) having a recess (131) that is engaged with a protrusion (171) of the knob (17); wherein during in use, the knob (17) can be pulled to disengage the shaft (15) from the holes (22), such that the inner post can be adjusted.

2. The improved structure of the spring bolt according to claim 1, wherein the end (13) of the connecting shaft (10) and the protrusion (171) of the knob (17) are D-shaped or polygonal that mate with each other.

3. The improved structure of the spring bolt according to claim 1, wherein the shaft (15) has a groove (151) or threads, such that the shaft (15) can be threaded into the knob (17) or fixed to the knob (17) by a fixing bolt (18).

4. The improved structure of the spring bolt according to claim 1, wherein the elastic member (16) is a spring or polyurethane.

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新型

全 4 頁

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A63B22/00

A63B23/00

[54]名稱：彈簧插銷結構改良

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[57]申請專利範圍：

- 1.一種彈簧插銷結構改良，其包含有供相互插組的固定管及內管件，於內管面上等分排列定位孔，而於固定管的外側鎖裝一插置有彈性件的插銷桿，供與內管做相互插合固定連接；其特徵在於：插銷桿在穿置彈性件後直接插組於連接桿之U形槽內，連接桿一端外環面上預設螺紋面與固定管相鎖接，而插組之插銷桿在貫穿連接桿後與旋轉鈕相互鎖裝一體，依連接桿的端頭環上可預設凹落插槽或形成與旋轉鈕相對的凸塊或環端，可做相互插合組裝，方便插組調整時，可經由旋轉鈕向外抽拉出後直接運動插固之插銷桿拉出後，旋轉適當角度，便可簡便卡合組裝，達到插組管件的升降或伸縮調整之簡便實用目的。
- 2.如申請專利範圍第1項所述之彈簧插銷結構改良，其中連接桿外側端與

旋轉鈕底端凸出的插合端緣，可設成相對稱的半形環緣或多角螺栓頭狀設計者。

- 3.如申請專利範圍第1項所述之彈簧插銷結構改良，其中插銷桿的插入端可預設有凹落的環槽或直接形成螺紋端，供與旋轉鈕相互鎖組或由鈕體的外環以固定栓做鎖組定位一體。
10. 4.如申請專利範圍第1項所述之彈簧插銷結構改良，其中彈性件可以彈簧或優力膠充用之。

圖式簡單說明：

- 第一圖：係本創作插銷桿之組裝立體分解圖。
- 第二圖：係本創作插銷桿之結構平面圖。
- 第三圖：係本創作插銷桿鎖插組裝平面圖。
20. 第四圖：係本創作插銷桿插固組

(2)

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裝使用實施例圖。

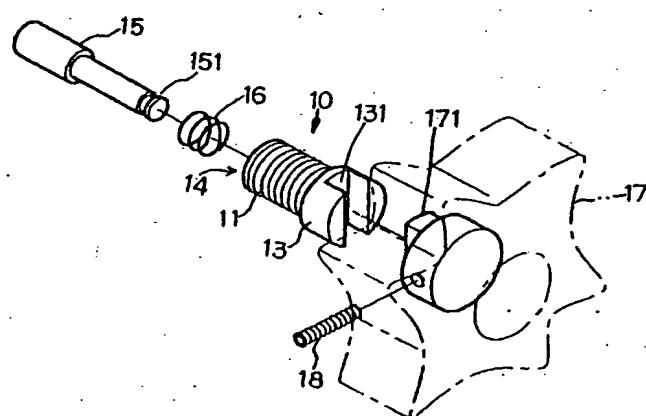
第五圖：係本創作另一種插銷桿
結構組裝分解參考圖。

第六圖：本創作插銷桿具呈六角

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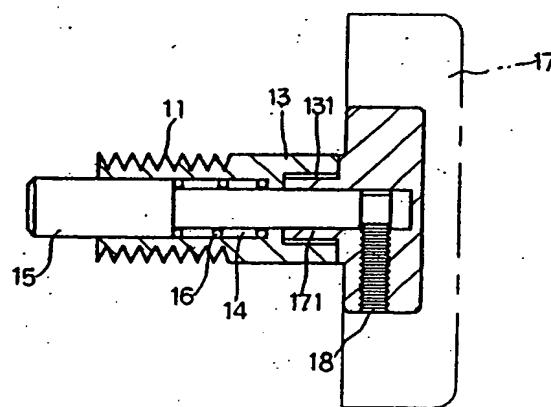
狀插組結構分解示意圖。

第七圖：係第六圖所示鎖裝組合
動作平面示意圖。



第一圖

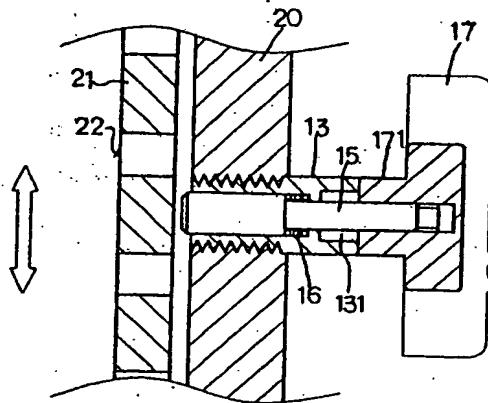
(Fig. 1)



第二圖

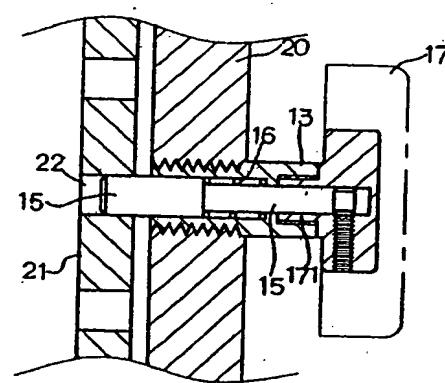
(Fig. 2)

(3)



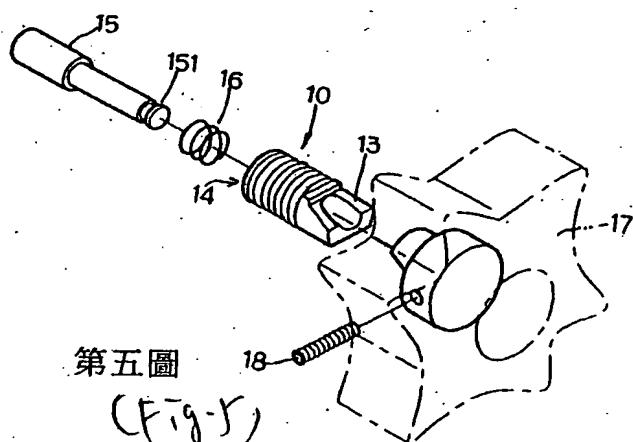
第三圖

(Fig. 3)



第四圖

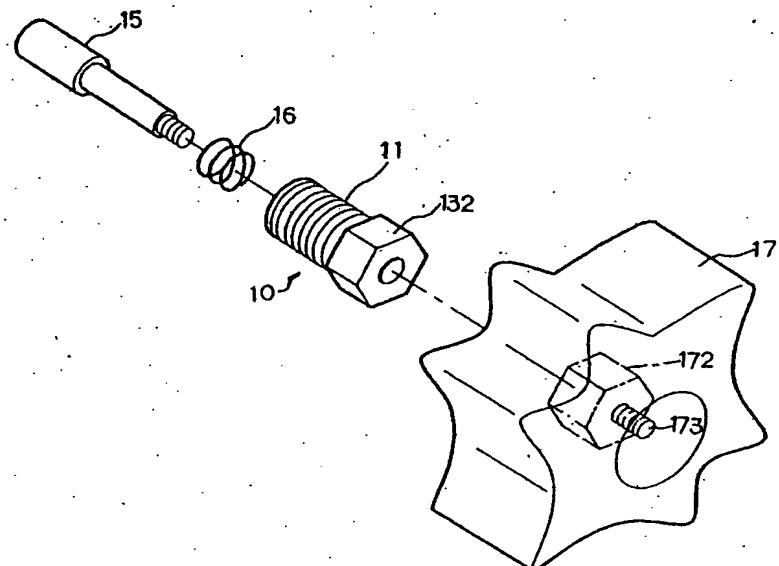
(Fig. 4)



第五圖

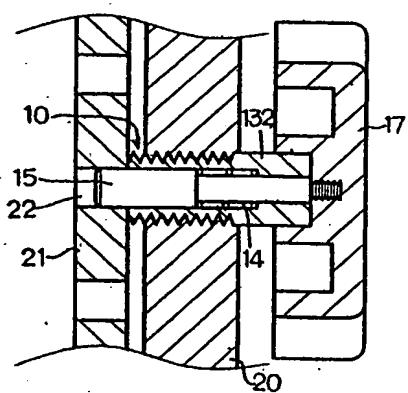
(Fig. 5)

(4)

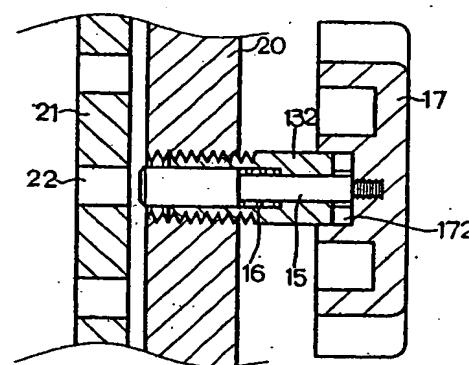


第六圖

(Fig. 6)



(B)



(A)

第七圖

(Fig. 7)